CLAIMS

What is claimed is:

1. A method of controlling selection of parameters for automatic retransmission in a point-to-multipoint wireless communication link having an upstream portion and a downstream portion, the method comprising the steps of:

selecting parameters for automatic retransmission independently for the downstream portion and the upstream portion of the wireless communication link; and

including the parameters in a control section of a frame, the control section for sending control information downstream.

2. The method of claim 1, wherein the upstream portion is for communicating data from customer premises equipment to a base station controller, and the downstream portion is for communicating data from the base station controller to the customer premises equipment.

3. The method of claim 2, wherein the parameters for automatic transmission are dynamically selected based on previous communication between the base station and the customer premises equipment.

4. The method of claim 2, further comprising the step of sending the control section of the frame downstream from the base station controller to the customer premises equipment, whereby the base station controller controls parameters for both upstream and downstream retransmission.

5. The method of claim 2, further comprising dynamically and adaptively determining new selected parameters for automatic retransmission, wherein the base station controller determines the new selected parameters in response to conditions of a wireless communication link with each independent CPE.

6. The method of claim 5, wherein the parameters for automatic retransmission are selected responsive to a number of bytes successfully sent from a sender to a receiver.

7. A method of controlling upstream retransmission in a point-to-multipoint wireless communication link having an upstream portion and a downstream portion, comprising the step of:

determining an amount of bandwidth allocated in the upstream portion for sending messages associated with automatic retransmission, wherein the amount of bandwidth is determined by a sender of the downstream portion and is included in the downstream portion.

8. The method of claim 7, wherein the upstream portion is for communicating data from customer premises equipment to a base station controller, and the downstream portion is for communicating data from the base station controller to the customer premises equipment, whereby the base station controller is the sender of the downstream portion that determines the amount of bandwidth allocated in the upstream portion for sending messages associated with automatic retransmission.

9. The method of claim 8, wherein the messages are acknowledgement and non-acknowledgement messages.

10. The method of claim 8, further comprising the step of allocating some portion of the upstream portion as a shared resource and some portion of the upstream portion as un-shared, wherein the allocating is performed by the base station controller.

11. A method of dynamically and adaptively responding to acknowledgement and non-acknowledgement messages in a point-to-multipoint wireless communication link between a base station controller and plural customer premises equipment, the communication link having an upstream portion for communicating data from the customer premises equipment to the base station controller, and the downstream portion for communicating data from the base station controller to the customer premises equipment, the method comprising the steps of:

setting a first timeout each time the base station controller receives a non-acknowledgement message from a selected customer premises equipment, wherein during this first timeout duration, the base station controller discards further acknowledgement and non-acknowledgement messages from the selected customer premises equipment; and

setting a second timeout each time the base station controller receives an invalid message from the selected CPE, wherein during the second timeout duration, the base station controller discards all further messages received from the selected customer premises equipment.